SYSTEM DC 90 TECHNOLOGY TRANSFER

System DC 90 technology transfer consists of making microseismic reonization for territory, photogrametric (tereistic and avio) photographing of objects, project of technology, catalog of elements, project of seismic strengthening of construction, production and delivery of dampers, acquiring and delivery of specialist's equipment, acquiring and delivery of laboratory equipment needed for quality control, supervising, instructioning, staff educating, KNOW-HOW and project directing.

0. Projecting task

Microseisimic reonization, photogrametric photographing of objects, categorization of objects, making objects strengthening projects, acquiring, production, delivery and building-in elements of SYSTEM DC 90 technology.

Necessary data:

- Annual capacity in m2 of gross surface of objects predicted for seismic strengthening.
- Types of objects.
- Surface by object.
- Number of objects by type.
- Flooring of object.
- Types of damage on vertical elements for reception of horizontal forces.
- Types of damage on horizontal elements (ceiling and slab structures), for reception of horizontal forces.
- Foundation condition.
- Type of damage on secondary elements (compartment and facade walls, stairways).
- Other characteristics of object.
- Total surface of objects predicted for seismic strengthening.

1. Microseismic reonisation for territory

a. Price according to m2 of the territory

2. Photogrametrical (terestic-terrain and avio) photographing of damaged objects.

a. Price according to m2 of gross surface of objects.

3. Project of technology

a. Price for given annual capacity.

4. Catalog of elements

a. Price of the catalog for frame objects.
b. Price of the catalog for build objects.

5. Project of seismic strengthening of construction

a. Price according to m2 of gross surface of objects.

6. Production and delivery of dampers and belonging steel elements and additives

a. Price according to set.

7. Acquisition and delivery of specialist's equipment

a. Set of equipment for annual capacity.

8. Acquisition and delivery of laboratory equipment for quality control

a. Equipment for concrete control
b. Equipment for metal and welding control
c. Equipment for geometry control.

9. Supervising

a. Price for engineer per month.

10. Instructioning, staff training and KNOW-HOW.

a. Price for engineer per month.
b. KNOW-HOW on m2 of gross surface of objects.

11. Project directing

a. Price for engineer per month.

1. Microseismic reonisation for territory

Geomechanical, geotechnical, geotectonic and other geological research and investigations of damaged territory, collecting existing bases, analysis of earthquake records, damage study of objects, estimation of seismic risk and hazard (done by local Institute in cooperation with the bearer of technology transfer - SYSTEM DC 90).

a. **Price according to m2 of the territory.**

2. Photogrametrical (terestic-terrain and avio) photographing of damaged objects.

Helicopter photographing of damaged territory (vertical and askance) by analogue and digital cameras of needed resolution. Tereistic photographing of object facades with measuring of needed dimensions on the object. Photographing of corridors and communication spaces for getting bases.
Computer data processing, making foundations of ground floor, floors, roof, vertical sections and object facades, technical description and report on object structure condition. If needed the necessary foundation uncovering should be done. The customer provides with helicopter and terrain vehicle for photographing.

a. **Price according to m2 of gross surface of objects.**

3. Project of technology

Description of all processes (marking, cutting, drilling anchor holes, building-in steel elements, dampers build-in, welding, cementing with small-grained concrete with additives, pulling-in, quality control, earthworks, concrete, reinforced concrete works, injecting by applying cement emulsion and injecting by applying epoxide.

a. **Price for given annual capacity.**

4. Catalog of elements

Technical description of the system structure. Elements of the system, foundation collars, verticals, diagonals, dampers, floor slabs, types of vertical stiffens, attic structures and connection details.

a. **Price of the catalog for frame objects.**
b. **Price of the catalog for build objects.**

5. Project of seismic strengthening of construction

Technical description. Load analysis. Seismic estimate. Dimensioning of elements. Graphic documentation and details.

a. **Price according to m2 of gross surface of objects.**

6. Production and delivery of dampers and belonging steel elements and additives

Delivery of dampers, connection slabs, askance verticals, anchor slabs and slabs for extension of pull-ins. Delivery of concrete additives and epoxide resins.

a. **Price according to set.**

7. Acquisition and delivery of specialist's equipment

Delivery of saws for concrete and brick cutting. Delivery of light mounting scaffolding, drilling machines and welding machines.

a. **Set of equipment for annual capacity.**

8. **Acquisition and delivery of laboratory equipment for quality control**

    a. **Equipment for concrete control**
    b. **Equipment for metal and welding control**
    c. **Equipment for geometry control.**

9. **Supervising**

    a. **Price for engineer per month.**

10. **Instructioning, staff education and KNOW-HOW.**

Education of Purchaser's specialists in Belgrade and Purchaser's place, following special program.

    a. **Price for engineer per month.**
    b. **KNOW-HOW on m2 of gross surface of objects.**

11. **Project directing**

Production of dynamic plans, network planning and following of realization in physical and financial sense.

    a. **Price for engineer per month.**